

**REMARKS**

This Amendment, filed in reply to the Office Action dated November 18, 2008, is believed to be fully responsive to each point of objection and rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 26, 29-33 and 35-40 are rejected. Claim 34 is objected to. Claim 26 is amended herewith to recite the subject matter of Claim 39. Support for this amendment can be found throughout the specification as originally filed, and at, for example, page 9, line 12. Further support can be found at page 45, line 24, which recites that the target sequence can be labeled or incorporated with elements that are used to derive the position value, and in Example 21 (depicted in Figure 20), which describes an example of this technique.

Claim 34 is amended herewith to correct a self-evident grammatical error. Claims 36-39 are canceled herewith without prejudice or disclaimer.

No new matter is added by way of this amendment. Entry and consideration of this amendment are respectfully requested.

**Claims 26 and 29-33 are Patentable under 35 U.S.C. § 102(b)**

1. On page 3 of the Office Action, Claims 26, 29 and 30 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Clausen *et al.* (U.S. Patent No. 5,068,191).

Initially, Applicants note that Claim 26 is amended herewith to recite the subject matter of Claim 39. As indicated in the rejection, Clausen *et al.* does not anticipate Claim 39 as examined. Accordingly, Clausen *et al.* does not anticipate Claim 26 as amended. Claims 29 and 30 are similarly not anticipated by Clausen *et al.*, at least by virtue of their dependency on Claim 26.

Withdrawal of the rejection is respectfully requested.

2. On page 4 of the Office Action, Claims 26, 29 and 31-33 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Drmanac *et al.* (*Science*, 1993, 260:1649-1652).

Initially, Applicants note that Claim 26 is amended herewith to recite the subject matter of Claim 39. As indicated in the rejection, Drmanac *et al.* does not anticipate Claim 39 as examined. Accordingly, Drmanac *et al.* does not anticipate Claim 26 as amended. Claims 29 and 31-33 are similarly not anticipated by Drmanac *et al.*, at least by virtue of their dependency on Claim 26.

Withdrawal of the rejection is respectfully requested.

3. On page 6 of the Office Action, Claims 36-39 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Brenner *et al.* (U.S. Patent No. 5,695,934).

In making the rejection, the Examiner contends that Brenner *et al.* discloses a method of producing a map of a target nucleic acid molecule, which anticipates the subject matter of Claims 36-38, citing Figure 2.

Regarding Claim 39, the Examiner takes the position that Brenner *et al.* discloses a method of sequencing all or part of a target nucleic acid molecule that anticipates the subject matter of Claim 39, citing Figure 2. With specific regard to step (B), the Examiner contends that the recited step of “determining the position of said portion within said target nucleic acid molecule” is inherent in the sequencing method of Brenner *et al.* inasmuch as that as each base

of a target nucleic acid sequence is determined, its position within the target nucleic acid is necessarily determined.

Initially, Applicants note that Claims 36-39 are canceled herewith, without prejudice or disclaimer, mooted the rejection of these claims. Nevertheless, in the interest of compacting prosecution, Applicants address the rejection as it applies to Claim 26 as amended, and claims dependent therefrom.

Turning to the substance of the rejection, the Examiner contends that in the method of Brenner *et al.*, as each base is sequenced, the position of each sequenced portion within the target nucleic acid molecule is *inherently* determined. However, Applicants respectfully submit that the rejection is in error at least because it ignores the explicit recitation in Claim 39 that “wherein step (B) is carried out by identifying a label which is incorporated into or onto said portion of said target nucleic acid molecule and which indicates the position of said portion within said target nucleic acid molecule.” In other words, Claim 26 recites the step of identifying the *label*, which is incorporated into or onto the portion of the target nucleic acid molecule, so as to determine the position of the portion within the target nucleic acid.

Contrariwise, Brenner *et al.* merely determine the location of each base in relation to juxtaposing bases. Brenner *et al.* does not disclose, either expressly or inherently, determining the position of a portion within a target nucleic acid molecule by identifying a label which is incorporated into or onto the portion of the target nucleic acid molecule. Accordingly, Brenner *et al.* fail to teach each and every element of Claim 26 as amended, as is required by law to maintain a finding of anticipation.

Furthermore, Applicants note that the disclosure of Brenner *et al.* is limited to, and does not extend beyond, the use of oligonucleotide tags to sort polynucleotides from a mixture of

polynucleotides, to allow parallel sequence determination. See column 2, line 37. Brenner *et al.* does not disclose, either expressly or inherently, using these tags to identify the position of a fragment within a target polynucleotide, as claimed. Indeed, in column 3, line 40, of Brenner *et al.*, it is disclosed that the nucleotide sequence of the target polynucleotide is determined by collating the sequences of the sequenced fragments, indicative of the use of “traditional” sequence collation techniques.

In view of the above, Applicants respectfully submit that Claim 26, and claims dependent therefrom, are not anticipated by Brenner *et al.*

**Claims 26, 29, 30, 35 and 40 are Patentable Under 35 U.S.C. § 103(a)**

1. On page 8 of the Office Action, Claims 26, 29, 30 and 35 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Brenner *et al.* (U.S. Patent No. 5,695,934) in view of Clausen *et al.* (U.S. Patent No. 5,068,191).

Initially, Applicants note that Claim 26 is amended herewith to recite the subject matter of Claim 39. As indicated in the rejection, Brenner *et al.* and Clausen *et al.*, taken alone or in combination, do not render obvious the subject matter of Claim 39 as examined, and thus do not render obvious the subject matter of Claim 26 as amended.

Further, as discussed above, Brenner *et al.* neither teaches nor suggests determining the position of a portion within a target nucleic acid molecule by identifying a label which is incorporated into or onto the portion of the target nucleic acid molecule, and such deficiency is not rectified by the addition of Clausen *et al.* Accordingly, Brenner *et al.* and Clausen *et al.*, taken alone or in combination, fail to teach each and every element of Claim 26 as amended, as

is required by law to maintain a finding of obviousness. Claims 29, 30 and 35 are not rendered obvious at least by virtue of their dependency on Claim 26.

Withdrawal of the rejection is respectfully requested.

2. On page 11 of the Office Action, Claims 26, 29, 30 and 40 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Brenner *et al.* (U.S. Patent No. 5,695,934) in view of Clausen *et al.* (U.S. Patent No. 5,068,191).

Initially, Applicants note that Claim 26 is amended herewith to recite the subject matter of Claim 39. As indicated in the rejection, Brenner *et al.* and Clausen *et al.*, taken alone or in combination, do not render obvious the subject matter of Claim 39 as examined, and thus do not render obvious the subject matter of Claim 26 as amended.

Further, as discussed above, Brenner *et al.* neither teaches nor suggests determining the position of a portion within a target nucleic acid molecule by identifying a label which is incorporated into or onto the portion of the target nucleic acid molecule, and such deficiency is not rectified by the addition of Clausen *et al.* Accordingly, Brenner *et al.* and Clausen *et al.*, taken alone or in combination, fail to teach each and every element of Claim 26 as amended, as is required by law to maintain a finding of obviousness. Claims 29, 30 and 40 are not rendered obvious at least by virtue of their dependency on Claim 26.

Withdrawal of the rejection is respectfully requested.

### Claim Objections

On page 14 of the Office Action, Claim 34 is objected to as being dependent upon a rejected base claim. The Examiner indicates that Claim 34 would be allowable if rewritten in independent form, incorporating all the limitations of the claim from which it depends.

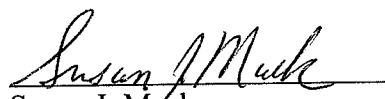
As discussed above, none of the cited references, taken alone or in combination, anticipates or renders obvious the subject matter of Claim 26. Accordingly, Applicants respectfully request that the objection be withdrawn.

### Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

  
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